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<b>(51) International Patent Classification <sup>6</sup> :</b> <b>C12N 5/08, A61K 35/14, 35/30</b>	<b>A1</b>	<b>(11) International Publication Number:</b> <b>WO 99/16863</b> <b>(43) International Publication Date:</b> 8 April 1999 (08.04.99)
<b>(21) International Application Number:</b> PCT/CA98/00916 <b>(22) International Filing Date:</b> 28 September 1998 (28.09.98)  <b>(30) Priority Data:</b> 60/060,289 29 September 1997 (29.09.97) US 09/100,679 19 June 1998 (19.06.98) US  <b>(63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Application</b> US 09/100,679 (CON) Filed on 19 June 1998 (19.06.98)  <b>(71) Applicant (for all designated States except US):</b> NEURO-SPHERES HOLDINGS LTD. [CA/CA]; Suite 204, 609 14th Street N.W., Calgary, Alberta T2N 2A1 (CA).  <b>(72) Inventors; and</b> <b>(75) Inventors/Applicants (for US only):</b> BJORNSON, Christopher, R. [CA/CA]; 204, 1228 - 13th Avenue S.W., Calgary, Alberta T3L 0T1 (CA). RIETZE, Rod, L. [CA/CA]; 2405 - 17th Street S.W., Calgary, Alberta T2T 4M9 (CA). REYNOLDS, Brent, A. [CA/CA]; 844 Beaverpoint Road, Saltspring, British Columbia V8K 1X9 (CA). VESCOVI, Angelo, L. [IT/IT]; Via Sardegna, 38, I-20146 Milan (IT).	<b>(74) Agent:</b> CALDWELL, Roseann, B.; Bennett Jones, Suite 4500, 855 - 2nd Street S.W., Calgary, Alberta T2P 4K7 (CA).  <b>(81) Designated States:</b> AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i>	
<b>(54) Title:</b> GENERATION OF HEMATOPOIETIC CELLS FROM MULTIPOTENT NEURAL STEM CELLS  <b>(57) Abstract</b>  Multipotent neural stem cell (MNSC) progeny are induced to generate cells of the hematopoietic system by placing the MNSC progeny in a hematopoietic-inducing environment. The hematopoietic-inducing environment can be either <i>ex vivo</i> or <i>in vivo</i> . A mammal's circulatory system provides an <i>in vivo</i> environment that can induce xenogeneic, allogeneic, or autologous MNSC progeny to generate a full complement of hematopoietic cells. Transplantation of MNSC progeny provides an alternative to bone marrow and hematopoietic stem cell transplantation to treat blood-related disorders.		

## WHAT IS CLAIMED IS:

1. A method of generating hematopoietic cells from mammalian multipotent neural stem cell progeny comprising placing said multipotent neural stem cell progeny in an environment that induces said multipotent neural stem cell progeny to produce said  
5 hematopoietic cells.
2. The method of Claim 1 wherein said multipotent neural stem cell progeny are derived from human neural tissue.
3. The method of Claim 1 wherein said multipotent neural stem cell progeny are derived from juvenile or adult tissue.
- 10 4. The method of Claim 1 wherein said multipotent neural stem cell progeny are derived from embryonic or fetal tissue.
5. The method of Claim 1 wherein said multipotent neural stem cell progeny are derived from neural tissue selected from of the cerebral cortex, frontal lobe, conus medullaris, hypothalamus, cerebellum, midbrain, brainstem, spinal cord, cerebro spinal  
15 fluid, and tissues surrounding CNS ventricles.
6. The method of Claim 1 wherein said environment comprises a mammal's circulatory system and said multipotent neural stem cell progeny are administered to said circulatory system.
7. The method of Claim 6 wherein prior to administering said multipotent neural stem  
20 cell progeny to said circulatory system, said mammal undergoes a treatment to suppress or deplete endogenous hematopoietic cells.
8. The method of Claim 7 wherein said treatment is radiation.